Welcome to the 2009 Genomics: GTL Awardee Workshop and USDA-DOE Plant Feedstock Genomics for Bioenergy Joint Program Meeting. The Genomics: GTL program supports fundamental research on microbes and plants with an emphasis on understanding systems biology across multiple scales of organization ranging from subcellular protein-protein interactions to complex community interactions at the ecosystem scale. Genomics: GTL research employs advanced molecular and computational biology approaches enabled by genome sequencing and emphasizes multidisciplinary efforts combining expertise in microbiology, plant biology, physiology, ecology, bioinformatics, metabolic engineering, and other fields. The ultimate goal of the Genomics: GTL program is to foster fundamental research that addresses critical DOE missions in bioenergy production, fate and transport of environmental contaminants, and biogeochemical cycling and biosequestration of carbon.

The past year has been exciting and productive for the Genomics: GTL program. The DOE Bioenergy Research Centers have completed their first year of operation. The three centers support collaborative, multidisciplinary research efforts aimed at improving the digestibility of bioenergy feedstocks and providing new means for the conversion of cellulosic biomass to biofuels. We welcome the many new members of the GTL community who will be joining us at this year's meeting to share new results from research at the three centers. In 2008, the Genomics: GTL program also expanded its support of research in quantitative biochemistry and metabolic engineering for biological hydrogen production.

This year's meeting will feature our first breakout session devoted to this topic, as well as breakouts focusing on multiscale modeling approaches, sustainability issues relevant to bioenergy production, and the application of various "omic" techniques to molecular measurements and genome annotation. We will discuss two major workshops held by Genomics: GTL last year, one focusing on carbon cycling and biosequestration and another on the establishment of a Genomics: GTL Knowledgebase. As a new feature for this year's meeting, several outstanding graduate students have been selected to make brief presentations during lunchtime sessions, and we encourage you to come and hear about their work.

This meeting brings together researchers supported by the Genomics: GTL program and the USDA-DOE Plant Feedstock Genomics for Bioenergy Program, which focuses on genomics-based research leading to the improved use of biomass and plant feedstocks for producing liquid transportation fuels or renewable chemical feedstocks. By bringing together these distinct but complementary research communities, we hope to stimulate the exchange of ideas, sharing of expertise, and formation of new partnerships.

We look forward to an exciting and productive meeting and encourage you to be an active participant in discussions during the plenary presentations, breakout meetings, and poster sessions. We thank you for lending your expertise and vision to Genomics: GTL and the USDA-DOE Plant Feedstock Genomics for Bioenergy Program and wish you continued success in the coming year.

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